

# Influenza Weekly Surveillance Report



A REPORT BY THE HEALTH PROTECTION SURVEILLANCE CENTRE IN COLLABORATION WITH THE IRISH COLLEGE OF GENERAL PRACTITIONERS, THE NATIONAL VIRUS REFERENCE LABORATORY & THE DEPARTMENTS OF PUBLIC HEALTH.

**Week 8 2007 (19<sup>th</sup> to 25<sup>th</sup> February 2007)**

## Summary

During week 8 2007, influenza activity was at medium levels in Ireland, with 103 influenza-like illness (ILI) cases reported by sentinel GPs. Eighteen specimens tested by the NVRL were positive for influenza A virus during week 8.

## Background

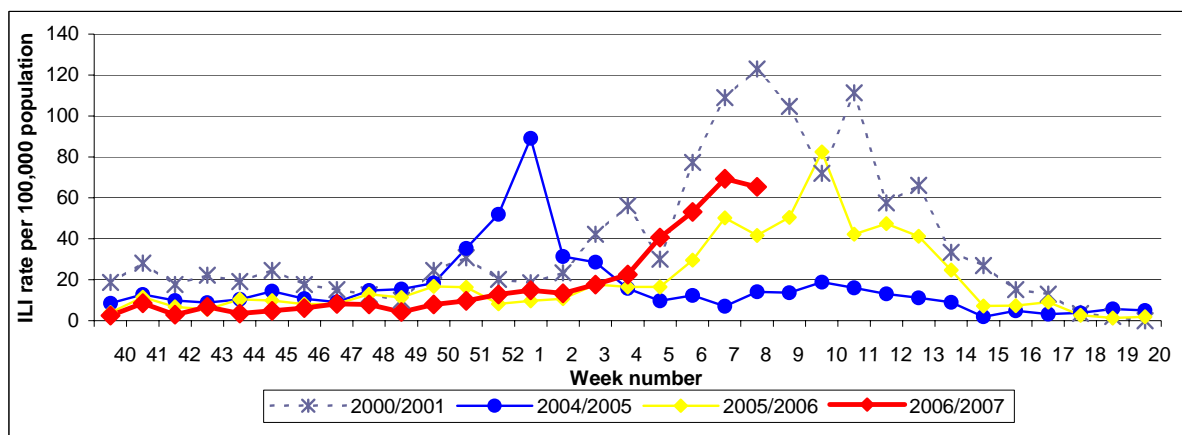
This is the seventh season of influenza surveillance using computerised sentinel general practices in Ireland. The Health Protection Surveillance Centre (HPSC) is working in collaboration with the Irish College of General Practitioners (ICGP), the National Virus Reference Laboratory (NVRL) and the Departments of Public Health on this sentinel surveillance project. Forty-seven sentinel general practices have been recruited to report on the number of patients with ILI on a weekly basis. ILI is defined as the sudden onset of symptoms with a temperature

of 38°C or more, with two or more of the following: headache, sore throat, dry cough and myalgia. Sentinel GPs send a combined nasal and throat swab, to the NVRL, on at least one patient per week where a clinical diagnosis of ILI is made during the influenza season. This report includes data on ILI cases reported by sentinel GPs, influenza test results from the NVRL, influenza notifications, registered deaths attributed to influenza, and regional influenza activity reported by the Departments of Public Health.

## Results

### Clinical Data

One hundred and three ILI cases were reported from sentinel GPs during week 8 2007, corresponding to an ILI consultation rate of 64.5 per 100,000 population, a decrease from the updated rate of 69.3 in week 7 (figure 1).

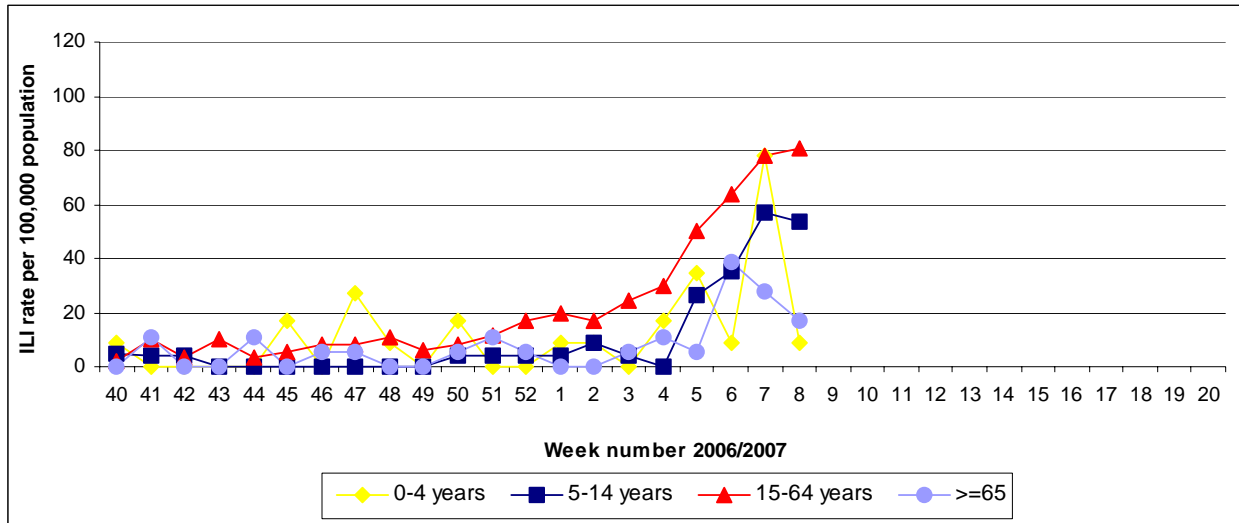


**Figure 1:** GP consultation rate for ILI per 100,000 population by week, during the 2000/2001\*, 2004/2005, 2005/2006 & 2006/2007 influenza seasons.

\* Highest recorded levels of ILI activity since initiation of sentinel surveillance.

## Results (continued)

One case was in the 0-4 year age group (8.8 per 100,000 population), twelve cases in the 5-14 year age group (53.5 per 100,000 population), 87 cases were in the 15-64 year age group (80.5 per 100,000 population) and three cases were in the 65 years or older age group (16.9 per 100,000 population) as shown in figure 2. Forty-three of the 47 (92%) sentinel general practices reported during week 8 2007, with 30 reporting ILI.



**Figure 2:** Age specific GP consultation rate\* for ILI per 100,000 population by week during the 2006/2007 influenza season. \*Please note the denominator used in the age specific consultation rate is from the 2002 census data; this assumes that the age distribution of the sentinel general practices is similar to the national age distribution.

### ***Virological Data from the National Virus Reference Laboratory (NVRL)***

The NVRL tested 28 specimens taken by sentinel GPs during week 8 2007, 10 of which were positive for influenza A unsubtype and three were positive for influenza A(H3). The NVRL also tested 46 non-sentinel specimens taken during week 8 2007, mainly from hospitalised paediatric cases. Six non-sentinel specimens were positive for respiratory syncytial virus (RSV) and five were positive for influenza A unsubtype (table 1). During the 2006/2007 season to date, 119 influenza A viruses and two influenza B viruses have been detected. Of the 119 influenza A viruses, two have been subtyped as A(H1) and 62 have been subtyped as A(H3). Influenza positive specimens have been detected in all of the eight HSE-Areas so far this season (table 2). Table 3 shows influenza positive specimens detected by the NVRL by age group (in years) for week 8 2007 and for the 2006/2007 season to date. Figure 3 compares the ILI consultation rates by season and the number of positive influenza specimens tested by the NVRL. Figure 4 compares the number and percentage of non-sentinel RSV positive specimens detected during the 2005/2006 and 2006/2007 influenza seasons.

**Table 1:** Number of sentinel and non-sentinel\* respiratory specimens and positive results for week 8 2007 and the 2006/2007 season to date

Week Number	Specimen Type	Total Specimens	No. Influenza Positive	% Influenza Positive	Influenza A	Influenza B	RSV
<b>8 2007</b>	Sentinel	28	13	46.4	13	0	NA
	Non-Sentinel	46	5	10.9	5	0	6
	<b>Total</b>	<b>74</b>	<b>18</b>	<b>24.3</b>	<b>18</b>	<b>0</b>	<b>6</b>
<b>40 2006 - 8 2007</b>	Sentinel	275	92	33.5	90	2	NA
	Non-Sentinel	1288	29	2.3	29	0	322
	<b>Total</b>	<b>1563</b>	<b>121</b>	<b>7.7</b>	<b>119</b>	<b>2</b>	<b>322</b>

\*Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case.

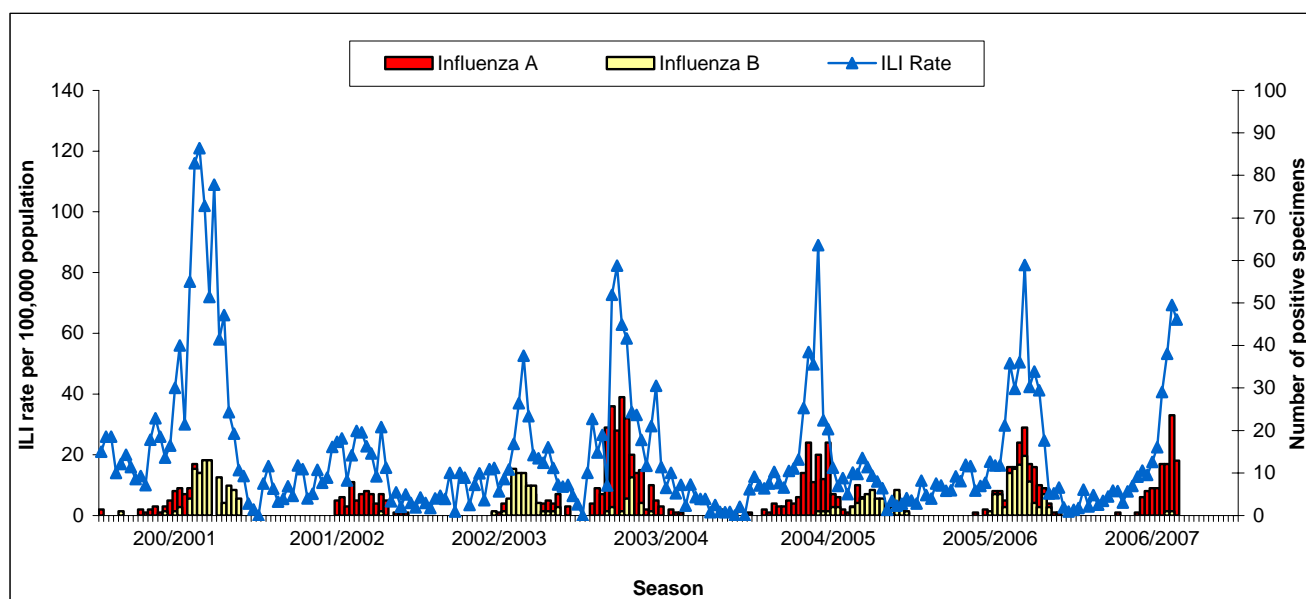
**Table 2:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by HSE-Area for week 8 2007 and the 2006/2007 season to date

	Week 8 2007			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
HSE-ER	7	0	7	39	0	39
HSE-MA	1	0	1	5	0	5
HSE-MWA	2	0	2	11	0	11
HSE-NEA	2	0	2	19	0	19
HSE-NWA	1	0	1	3	0	3
HSE-SEA	3	0	3	15	2	17
HSE-SA	0	0	0	15	0	15
HSE-WA	2	0	2	12	0	12
<b>Total</b>	<b>18</b>	<b>0</b>	<b>18</b>	<b>119</b>	<b>2</b>	<b>121</b>

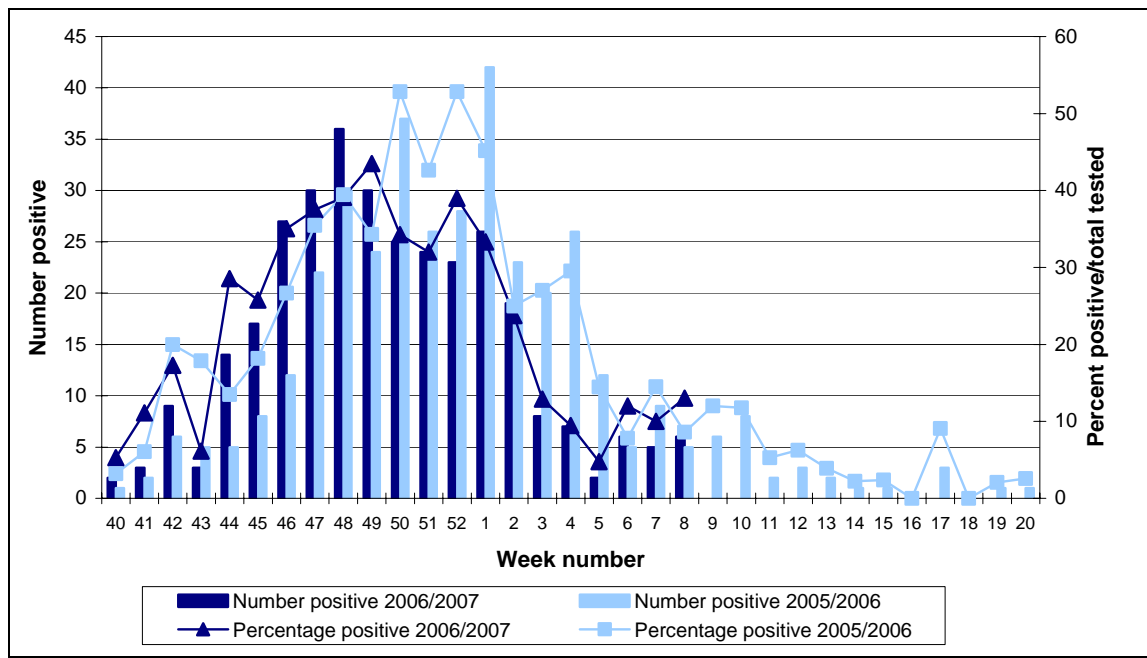
\* Please note that non-sentinel specimens include all specimens referred to the NVRL, these specimens are mainly from hospitals and some GPs and may include more than one specimen from each case.

**Table 3:** Total number of sentinel and non-sentinel\* influenza A and B positive specimens by age group (in years) for week 8 2007 and the 2006/2007 season to date

	Week 8 2007			Season to date		
	Flu A	Flu B	Total	Flu A	Flu B	Total
0-4 years	4	0	4	23	0	23
5-14 years	1	0	1	12	0	12
15-64 years	13	0	13	82	2	84
65 years and older	0	0	0	1	0	1
Age group unknown	0	0	0	1	0	1
<b>Total</b>	<b>18</b>	<b>0</b>	<b>18</b>	<b>119</b>	<b>2</b>	<b>121</b>



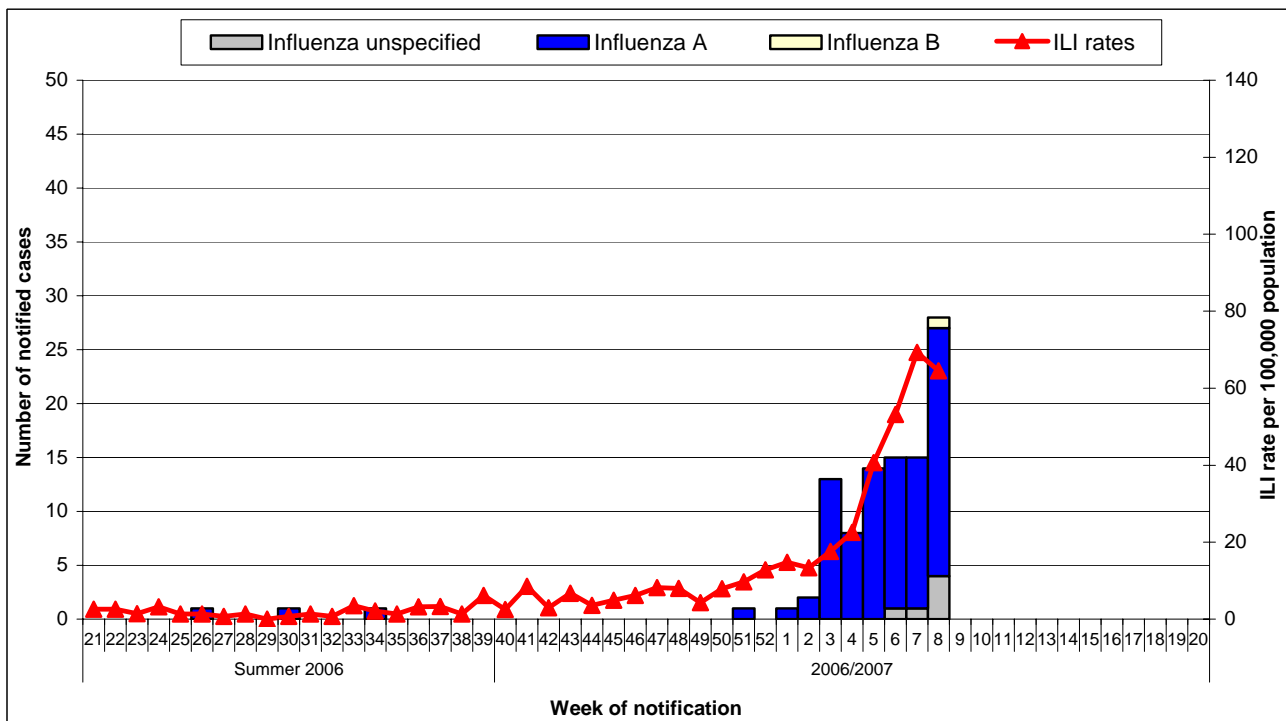
**Figure 3:** ILI rate per 100,000 population and the number of positive influenza specimens detected by the NVRL during the 2000/2001, 2001/2002, 2002/2003, 2003/2004, 2004/2005, 2005/2006 & 2006/2007 seasons.



**Figure 4.** Number and percentage of non-sentinel RSV positive specimens detected during the 2005/2006 and 2006/2007 influenza seasons.

### Weekly Influenza Notifications

Twenty-eight influenza cases were notified to HPSC during week 8 2007. Influenza cases notified to HPSC during the summer of 2006 and during the 2006/2007 influenza season are shown in figure 5 and compared to ILI consultation rates.



**Figure 5:** Number of notifications\* of influenza (possible & confirmed) by type and by week of notification compared to sentinel GP ILI consultation rates per 100,000 population during the summer of 2006 and the 2006/2007 influenza season.  
 \*Notification data are provisional and were extracted from [CIDR](#) on the 28/02/2007 at 13.13

### ***Mortality Data***

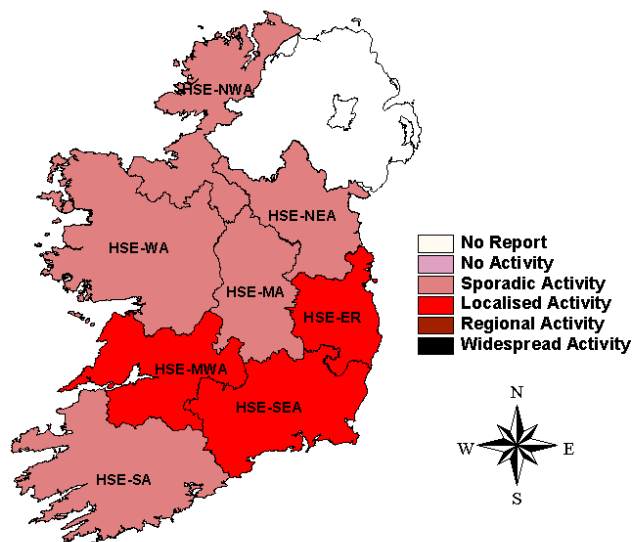
One influenza associated death was registered with the GRO during week 8 2007. Influenza was the secondary cause of death and not the primary cause. This is the second registered death attributed to influenza and reported to HPSC during this season. The previous influenza associated death was registered during week 3 2007 but occurred in January 2006. Both occurred in persons aged 64 years or older.

### ***Outbreak Reports***

No influenza/ILI outbreaks were reported to HPSC during week 8 2007.

### ***Regional Influenza Activity by HSE-Health Area***

Influenza activity is reported on a weekly basis from the Departments of Public Health. Influenza activity is based on sentinel GP ILI consultation rates, laboratory confirmed influenza cases and influenza/ILI outbreaks. Each Department of Public Health has established one sentinel hospital in each HSE-Area, to report total hospital admissions, accident and emergency admissions and respiratory admissions data on a weekly basis. Sentinel primary and secondary schools were also established in each HSE-Area in close proximity to the sentinel GPs, reporting absenteeism data on a weekly basis. During week 7, sporadic influenza activity based on isolated cases of ILI and influenza virus isolations was reported by HSE-MA, -NEA, -NWA, -SA and -WA. Localised activity was reported from HSE-ER, -MWA and -SEA during week 7 2007 (figure 6). During week 7, elevated levels of absenteeism were reported by one primary and one secondary school in HSE-ER (due to respiratory illness), one primary school in HSE-NWA (due to respiratory illness) and by three primary schools in HSE-SEA.



**Figure 6:** Map of influenza activity by HSE-Health Area during week 7 2007

### ***Influenza Activity in Northern Ireland***

One hundred and forty-four ILI cases and 28 cases of clinical influenza were reported from sentinel GPs in Northern Ireland during week 8 2007, corresponding to a combined rate of 159.6 per 100,000 population, a decrease from the updated rate of 200 per 100,000 population during week 7. Influenza A viruses were detected in 14 non-sentinel swabs from hospitalised patients and from five sentinel swabs.

<http://www.cdscni.org.uk>

### ***Influenza Activity in England, Scotland & Wales***

During week 8, clinical influenza activity within the UK has decreased or remained at similar levels. Activity in England remains above the baseline threshold while Scottish and Welsh activity is below baseline levels. In England, the ILI episode incidence rate has decreased from 43.7 per 100,000 in week 7 to 41.3 per 100,000 in week 8. These figures are above the English baseline activity threshold of 30 per 100,000 persons and are referred to as normal seasonal activity. In Scotland, GP consultation rates for ILI decreased to 24 consultations per 100,000 in week 8 from 29 per 100,000 in week 7. These rates are below the Scottish baseline threshold of 50 consultations per 100,000. In Wales, GP consultations for influenza have decreased from 17.8 per 100,000 in week 7 to 9.5 per 100,000 in week 8. Both rates are below the Welsh baseline threshold of 25 consultations per 100,000. Sixty six samples referred to the Centre for Infections' Respiratory Virus Unit (RVU) tested positive for influenza A. <http://www.hpa.org.uk/infections/topics%5Faz/influenza/seasonal/activity0607/flureport.htm>

### ***Influenza Activity in Europe***

During week 7 2007, for the intensity indicator, the national network level of ILI and/or acute respiratory infection (ARI) was high in Luxembourg and Norway, medium in 22 countries and low in Denmark. Consultation rates for ILI or ARI exceeded those in week 6 in 16 countries. In six countries (Czech Republic, France, Hungary, Portugal, Serbia and Spain) the level of influenza activity was for the first time lower than in the previous weeks. For the geographical spread indicator, widespread activity was reported in 14 countries. Latvia and Romania reported regional activity, four countries reported local and six reported sporadic activity. In most countries the consultation rates for ILI/ARI started to increase around mid January. All 30 countries participating in EISS reported increased levels of influenza activity this winter. In countries where influenza activity started to increase early in 2007 (e.g. Spain and Switzerland) activity has waned. The total number of respiratory specimens collected by sentinel physicians was 2321, of which 857 (36.9%) were positive for influenza virus. Of these, 837 (98%) specimens tested positive for influenza A virus and 20 (2%) for influenza B. In addition, 647 specimens from non-sentinel sources (e.g. specimens collected for diagnostic purposes in hospitals) tested positive for influenza virus, of which 642 (99%) were influenza A and 5 (1%) influenza B. Based on subtyping data of all influenza virus detections (N=8783; sentinel and non-sentinel data), 5306 (60%) were type A not subtyped, 1647 (19%) were A(H3N2), 1482 (17%) were A(H3N2), 105 (1%) were A(H1N1), 82 (1%) were A(H1N1) and 161 (2%) type B. Based on antigenic and/or genetic characterisation of 1256 viruses, 881 were A/Wisconsin/67/2005 (H3N2)-like; 236 A/California/7/2004 (H3N2)-like [a strain of the A(H3N2) virus that emerged during the 2004-2005 season, circulated during the 2005-2006 season, and is closely related to the A/Wisconsin/67/2005 (H3N2) reference virus]; 68 A/New Caledonia/20/99 (H1N1)-like; 70 B/Malaysia/2506/2004-like (the B/Victoria/2/87 lineage); and one B/Jiangsu/10/2003-like (the B/Yamagata/16/88 lineage). <http://www.eiss.org/index.cgi>

### ***Influenza Activity in Canada***

During week 7, influenza activity in Canada continued to increase, with most indicators of influenza activity having increased from the previous week. Widespread influenza activity was reported in Prince Edward Island, Toronto, Ontario and in the Fraser region of British Columbia, while localised activity was reported in 29 other regions across the country. Sporadic influenza activity was reported in various regions across Canada, while the rest reported no activity. Note that no data for a region in the Northwest Territories was received this week. In week 7, the percent of specimens that tested positive for influenza virus was 16.7% (615/3,681). Of the influenza virus detections to date this season, 97% (2,835/2,925) were influenza A viruses. In week 7, the ILI consultation rate was 31 per 1,000 patient visits, which is within the expected range for this week. The rate was highest among children and the sentinel response rate was 69%. During week 7, 81 new outbreaks were reported: 15 influenza outbreaks in long term care facilities, two in hospitals, four in another type of facility and 60 outbreaks of ILI in schools (mostly from the Atlantic provinces). The National Microbiology Laboratory (NML) has characterised 432 influenza viruses for the 2006-2007 influenza season: 154 A/New Caledonia/20/1999(H1N1)-like, 256 A/Wisconsin/67/05(H3N2)-like, 5 B/Malaysia/2506/2004-like, and 17 B/Shanghai/361/2002-like. All but the B/Shanghai/361/2002-like strain are included in the composition of the 2006-2007 Canadian influenza vaccine. <http://www.phac-aspc.gc.ca/fluwatch/index.html>

### ***Influenza Activity in the United States***

During week 7, influenza activity continued to increase in the United States. Among specimens tested by the U.S. World Health Organization (WHO) and the National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories for influenza, 24.8% were positive. ILI data was above baseline for the ninth week this season. Twenty-four states reported widespread influenza activity, 14 states and New York City reported regional influenza activity, 10 states and the District of Columbia reported local influenza activity and two states reported sporadic influenza activity. The reporting of widespread or regional influenza activity increased from 33 states for week 6 to 38 states for week 7. The percent of deaths due to pneumonia and influenza remained below baseline level. During week 7, WHO and NREVSS laboratories reported 4,798 specimens tested for influenza viruses, 1,189 (24.8%) of which were positive: 129 influenza A (H1) viruses, 31 influenza A (H3) viruses, 794 influenza A viruses that were not subtyped and 235 influenza B viruses. Since October 1, 2006, WHO and NREVSS laboratories have tested a total of 101,388 specimens for influenza viruses and 10,458 (10.3%) were positive. Among the 10,458 influenza viruses, 8,748 (83.6%) were influenza A viruses and 1,710 (16.4%) were influenza B viruses. Two thousand four hundred thirty-nine (27.9%) of the 8,748 influenza A viruses have been subtyped: 2,117 (86.8%) were influenza A (H1) viruses and 322 (13.2%) were influenza A (H3) viruses.

<http://www.cdc.gov/flu/>

### ***Influenza Activity Worldwide***

During week 7 2007 the following influenza isolates were reported; China 187 (2 A(H1), 149 A(H3), 14 A unsubtyped and 22 B), Iran 9 (1 A(H1), 4 A(H3) and 4 B) and Japan 20 (12 A(H3) and 8 B). China, Madagascar and Mongolia reported sporadic levels of ILI while Argentina reported no activity.

<http://gamapserver.who.int/GlobalAtlas/home.asp>

### ***Avian Influenza***

As of the 1<sup>st</sup> March 2007, 275 confirmed human cases and 167 (61%) deaths from avian influenza A (H5N1) have been reported to the WHO from Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Lao Peoples Democratic Republic, Nigeria, Thailand, Turkey and Vietnam.

The Ministry of Health in Lao People's Democratic Republic has reported its first human case of infection with the H5N1 avian influenza virus on 27 February 2007. The 15-year-old female was from Vientiane, where she developed influenza-like symptoms on 10 February and was hospitalized in Vientiane with fever and respiratory symptoms on 15 February. She sought medical care in neighbouring Thailand on 17 February and is currently in Nongkhai public hospital where she remains in a stable condition. Samples taken by Lao epidemiologists and Thai clinicians were tested by the National Institute of Health in Thailand and were positive for H5N1 infection. The Lao Government is also providing samples to a WHO collaborating centre for examination.

Further information on avian influenza is available on the following websites:

WHO [http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

HPSC <http://www.ndsc.ie/hpsc/A-Z/Respiratory/AvianInfluenza/>

ECDC <http://www.ecdc.eu.int/>

### ***Northern Hemisphere Influenza Vaccine for the 2006/2007 Season***

The members of the WHO Collaborating Centres on Influenza recommended that influenza vaccines for the 2006/2007 influenza season in the Northern Hemisphere contain the following strains:

- an A/New Caledonia/20/99(H1N1)-like virus;
- an A/Wisconsin/67/2005 (H3N2)-like virus<sup>a</sup>;
- a B/Malaysia/2506/2004-like virus<sup>b</sup>

Candidate vaccine viruses include:

<sup>a</sup>A/Wisconsin/67/2005 (H3N2) and A/Hiroshima/52/2005

<sup>b</sup>B/Malaysia/2506/2004 virus and B/Ohio/1/2005

<http://www.who.int/csr/disease/influenza/recommendations2007north/en/index.html>

Further information on influenza can be found on the [HPSC website](#)

### **Acknowledgements**

HPSC, ICGP and NVRL wish to thank the sentinel GPs who have participated in the GP sentinel surveillance system and who have contributed towards this report

**This report was produced by Sarah Jackson & Dr. Joan O'Donnell, HPSC**